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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of)	
Curtiss Mitchell Austin et al.)	GAU: 1731
Ser. No. 09/709,009)	Examiner:
Filed: November 8, 2000)	Fiorilla
For: PROCESS ASSEMBLY UTILIZING FIXTURING)	
MADE OF AN OPEN-CELL CERAMIC SOLID)	
FOAM, AND ITS USE)	

RESPONSE TO OFFICE ACTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This application has been reviewed in light of the Office Action of February 26, 2003. Claims 1-20 are pending. Claims 16-20 are withdrawn from consideration, claims 10 and 12 are allowed (objected to), and claims 1-9, 11, and 13-15 are rejected. In response, the following remarks and attachments are submitted. Reconsideration of this application, as amended, is requested.

Restriction Requirement

Applicant affirms the election of the claims of Group I, claims 1-15, for prosecution, with traverse.

Applicant respectfully submits that the factual explanation presented for the

basis of the restriction really isn't on point. The explanation is that "...the process assembly can be used to process unsupported articles as well." The MPEP provision underlying the restriction requirement is phrased in terms of the "process as claimed" and the "apparatus as claimed". Claims 1 and 16 both require that the fixturing be used with a "supported article". If the process assembly were used to process an "unsupported article", then it would be outside the scope of claims 1 and 16, and the MPEP provision is not applicable. (As an aside, Applicant cannot image such a thing as an "unsupported article" in this context, because the "supported article" is simply the thing that requires support by the fixturing.) In any event, the rationale used to support the restriction requirement asserts a factual situation outside the claim scope.

Applicant asks that the Examiner reconsider and withdraw the restriction, and examine claims 16-20 as well.

Action on the Merits

Fixturing or tooling is widely used to position a supported article in a particular orientation or location, by itself or in relation to other articles, see the present Figure 1, for example. One of the problems in fixturing or tooling is that it often cannot sustain the elevated temperatures required in the processing of the supported article, or wears out too quickly. The present invention deals with the processing of a sacrificial ceramic to make a fixture, positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly, and thereafter processing the process assembly as required for the supported article. It is Applicant's belief that none of the references deal with ceramic fixturing or tooling, and there is no basis in these four applied references for denying patentability of the recited fixturing approach and method.

Claims 1, 7, 8, 14, and 15 are rejected under 35 USC 102 as anticipated by Breslin. Applicant traverses this ground of rejection.

The following principle of law applies to sec. 102 rejections. MPEP 2131

provides: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the ... claim. The elements must be arranged as required by the claim..." [citations omitted] This is in accord with the decisions of the courts. Anticipation under section 102 requires 'the presence in a single prior art disclosure of all elements of a claimed invention arranged as in that claim.' Carella v. Starlight Archery, 231 USPQ 644, 646 (Fed. Cir., 1986), quoting Panduit Corporation v. Dennison Manufacturing Corp., 227 USPQ 337, 350 (Fed. Cir., 1985)

Thus, identifying a single element of the claim which is not disclosed in the reference is sufficient to overcome a Sec. 102 rejection.

Claim 1 recites in part:

"positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly; and thereafter processing the process assembly as required for the supported article."

Applicant can find no disclosure in Breslin of this limitation and, more generally, no disclosure of the use of the material of Breslin as a fixturing material. No identification of the asserted location of any such disclosure in Breslin is presented in the explanation of the rejection. Applicant therefore cannot be certain what statements in Breslin are relied upon for such anticipatory disclosure. If the rejection is maintained, Applicant asks that the Examiner identify the source of the anticipatory disclosure in Breslin, by column and line number.

Applicant asks that the Examiner reconsider and withdraw this ground of rejection.

Claims 1, 11, 13, 14, and 15 are rejected under 35 USC 102 as anticipated by

Claar. Applicant traverses this ground of rejection.

Claim 1 recites in part:

“furnishing a sacrificial ceramic fixture precursor having a shaped portion thereof shaped to receive a supported article in contact therewith; thereafter

contacting the sacrificial ceramic fixture precursor to a molten reactive metal for a period of time sufficient to permit the sacrificial ceramic fixture precursor and the reactive metal to react together, producing a reacted ceramic fixture comprising an open-cell solid foam of ceramic cell walls having an interconnected intracellular volume therebetween;”

The approach of Claar does not utilize a sacrificial ceramic fixture precursor to produce an open-cell solid foam, as far as Applicant can find. Claar produces a bonded structure, which is the opposite of what is desired in fixturing. A fixture is used to hold and position the supported article, but desirably does not bond to it so as to make their separation difficult at a later time when the supported article is to be removed from the fixture.

Claim 1 also recites in part:

“positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly; and thereafter processing the process assembly as required for the supported article.”

Applicant can find no disclosure in Claar of this limitation and, more generally, no disclosure of the use of the material of Claar as a fixturing material. No identification of the asserted location of any such disclosure in Claar is presented in the

explanation of the rejection. Applicant therefore cannot be certain what statements in Claar are relied upon for such anticipatory disclosure. If the rejection is maintained, Applicant asks that the Examiner identify the source of the anticipatory disclosure in Claar, by column and line number.

Applicant asks that the Examiner reconsider and withdraw this ground of rejection.

Claims 1-6, 8, and 13-14 are rejected under 35 USC 103 as unpatentable over Gupta in view of Ten Eyck. Applicant traverses this ground of rejection.

The following principle of law applies to all sec. 103 rejections. MPEP 2143.03 provides “To establish prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” [emphasis added] That is, to have any expectation of rejecting the claims over a single reference or a combination of references, each limitation must be taught somewhere in the applied prior art. If limitations are not found in any of the applied prior art, the rejection cannot stand. In this case, the applied prior art references clearly do not arguably teach some limitations of the claims.

Claim 1 recites in part:

“contacting the sacrificial ceramic fixture precursor to a molten reactive metal”

Gupta does not teach this step. Gupta teaches the infiltration of silicon, but silicon is not a metal, to Applicant’s knowledge. A review of dictionaries and reference books did not find any that describe silicon as a metal. To the contrary, the authoritative Hampel “Glossary of Chemical Terms”, relevant pages attached, describes silicon as “...a nonmetal, like carbon...” The Wordsworth Dictionary of Science and Technology, relevant pages attached, describes silicon as a “nonmetallic element”.

Even a general purpose dictionary such as Webster's Encyclopedic Unabridged Dictionary of the English Language, relevant pages attached, defines silicon as a "nonmetallic element". If this rejection is maintained, Applicant asks for some support for the implicit suggestion that silicon is a metal. Ten Eyck teaches doping of semiconductors with elements that may be metallic, but there is no use of a reactive metal or a molten reactive metal, as far as Applicant can tell. Neither of the references, nor the combination of their teachings, teaches this limitation.

Claim 1 also recites in part:

"positioning the reacted ceramic fixture in relation to the supported article to produce a process assembly; and thereafter processing the process assembly as required for the supported article."

Applicant can find no disclosure in either reference of this limitation and, more generally, no disclosure of the use of the material of either reference as a fixturing material. No identification of the asserted location of any such disclosure in either reference is presented in the explanation of the rejection. Applicant therefore cannot be certain what statements in the references are relied upon for such anticipatory disclosure. If the rejection is maintained, Applicant asks that the Examiner identify the source of the relied-upon teaching in the references, by column and line number.

Applicant asks that the Examiner reconsider and withdraw this ground of rejection.

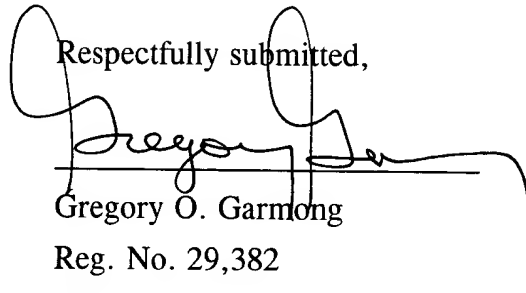
Applicant has not addressed the dependent claims in these remarks, but the limitations of the dependent claims are in many cases also not taught by the art.

Claims 10 and 12 are objected-to, and Applicant requests permission to defer the writing of these claims to independent form. Applicant believes that such rewriting will not be necessary, in view of Applicant's belief that the applied references do not negate

the patentability of the independent claim.

Applicant submits that the application is now in condition for allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory O. Garmong", is written over a horizontal line. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Gregory O. Garmong

Reg. No. 29,382

Attorney for Applicant

GLOSSARY OF CHEMICAL TERMS

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Consulting Chemical Engineer
Editor, ENCYCLOPEDIA OF CHEMISTRY

AND

Gessner G. Hawley

Editor, CONDENSED CHEMICAL DICTIONARY
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Van Nostrand Reinhold Company

New York Cincinnati Atlanta Dallas San Francisco

electrons, which are directly involved in chemical bonding. *See also* orbital; electron; Pauli exclusion principle.

shellac. An alcohol solution of a resin obtained from a unique type of tropical insect, especially in India. The unbleached type is called orange shellac due to its color. When dry it forms a hard, transparent coating and thus is used on furniture and other wood products as a finishing and protective coating. Its high electrical resistance makes it useful as an insulating coating. The name is derived from the same base as *lacquer* and is probably of Hindu origin.

sherardizing. *See* cementation.

shielding. Protection of personnel by placing adequate thicknesses of appropriate materials around nuclear reactors, and sources of high-energy x-rays and radioactive emanations. Lead is most frequently used for x- and gamma-ray protection because of its high density. Boron and cadmium are most effective as neutron absorbers. Such materials as hydraulic cements, polyethylene, paraffin, and water also afford considerable protection, but only in rather large amounts. *See also* absorption (3).

shortening. *See* cooking.

shortstop. A chemical compound used to stop a reaction at a predetermined point. Such agents are particularly useful in polymerization sequences in which it is not desirable for the reaction to go to completion. The term grew out of experimentation in high-polymer synthesis in the 1940s. Diethylhydroxylamine and sodium dimethyldithiocarbamate have been used.

Si Symbol for the element silicon; the name is said to be derived from the Latin word for *flint*.

silane. *See* silicon.

silica. The oxide of silicon, SiO_2 ; sand. *See also* silicon; silica gel.

silica gel. A porous solid material consisting of silica manufactured in pellets of various sizes; it is made by treating sodium silicate (water glass) with sulfuric acid. Its physical structure and uses are not unlike those of activated carbon. It has high adsorptive power for atmospheric moisture and finely divided solids and thus is largely used as a dehumidifier and clarifying agent and as a carrier for catalysts.

silicate. Any of a broad range of mineral compounds comprised of from one to six silica

chains. These include many of the more familiar gemstones (zircon, garnet, beryl, emerald), as well as asbestos (magnesium silicate), mica, and various types of clay (aluminum silicate). A well-known synthetic silicate is sodium silicate, a water-soluble glass commonly called water glass. Silicates are used in the manufacture of water-softening agents (zeolites). *See also* silicon, water glass.

silicon. An element.

Symbol	Si	Atomic Wt.	28.086
State	Solid	Valence	4
Group	IVA	Isotopes	3 stable
Atomic No.	14		

Silicon, m.p. 1420°C (2588°F), is the most abundant solid element, being second only to oxygen in prevalence; it rarely occurs in elemental form, virtually all of it existing as compounds (silicon dioxide, silicates, etc.). Silicon is a nonmetal, like carbon, to which it is chemically similar; it has the same valence and is next below carbon in the Periodic Table. Silicon forms single bonds with itself and with carbon, oxygen, hydrogen, and halogens, but it does not form double or triple bonds nor chains of more than six silicon atoms. This similarity to carbon accounts for its ability to form silanes (with hydrogen), siloxanes (with oxygen), and the industrially important silicone compounds (with oxygen and organic groups). Silicon is one of the few elements that have semiconducting properties. The most abundant compound is the dioxide (silica, sand) which is the basis of glass and a component of Portland cement; other important compounds are the tetrachloride, used in the preparation of various organosilicon products; the carbide (silica plus carbon); and the broad range of silicone products. In elemental form, silicon is used as an alloying agent in steel manufacture (ferrosilicon), and as a semiconductor, e.g., in solar cells. *See also* silicate; silicone; semiconductor.

silicon carbide. A chemical compound of carbon and silicon (SiC), trademarked "Carborundum." It is made by heating silica (sand) with coke in an electric furnace at temperatures of $1900\text{--}2600^\circ\text{C}$ ($3452\text{--}4712^\circ\text{F}$). It is an extremely hard, heat-resistant material which is a good conductor of heat and electricity. It is made as fine-ground particles, as fibers, and

The Wordsworth
**Dictionary of Science
& Technology**



Wordsworth Reference

cal breakdown, in portable or fixed silos, of vegetable matter (grasses, clovers, pea haulms, beet tops etc.), with the admixture of diluted molasses, suitable acids (e.g. formic) etc. Also *ensilage*, the process of making such food.

silanes (*Chem.*). A term given to the silicon hydrides: silane, SiH_4 , disilane, $\text{H}_2\text{Si-SiH}_3$, trisilane, $\text{H}_3\text{Si(SiH}_2)_2\text{SiH}_3$, etc.

silastic (*Plastics*). TN for a range of silicone rubbers. Noted for: very good heat resistance and a wide temperature range of application. Excellent chemical resistance and electrical properties.

silencer (*Autos.*). An expansion-chamber fitted to the exhaust pipe of an IC engine to dampen the noise of combustion. US *muffler*.

silent period (*Telecomm.*). Stated period within each hour during which all marine transmissions must close down and listen on the international distress frequency of 500 kHz.

silica (*Min.Ext.*). Silica brick used to line grinding mills when contamination by abraded steel must be avoided.

silica (*Chem.*). Dioxide (IV) oxide of silicon, SiO_2 , occurring in crystalline forms as quartz, cristobalite, tridymite; as cryptocrystalline chalcedony; as amorphous opal; and as an essential constituent of the silicate groups of minerals. Used in the manufacture of glass and refractory materials. Refractory materials containing a high proportion of silica (over 90%) are known as *acid refractories* (e.g. gannister), and are used in open-hearth and other metallurgical furnaces to resist high temperatures and attack by acid slags.

silica gel (*Chem.*). Hard amorphous granular form of hydrated silica, chemically inert but very hygroscopic. Used for absorbing water and vapours of solvents, especially in enclosed electronic equipment. When saturated, it may be regenerated by heat.

silica glass (*Glass*). See vitreous silica.

silica glass (*Min.*). Fused quartz, occurring in shapeless masses on the surface of the Libyan Desert, in Moravia, in parts of Australia and elsewhere; believed to be of meteoritic origin. See *tektites*.

silica poisoning (*Min.Ext.*). Loading of resins used in ion-exchange process with silica, thus reducing the efficiency of reaction with desired ions.

silicates (*Min.*). The largest group of minerals, of widely different, and in some cases, extremely complex composition, but all composed of silicon, oxygen, and one or more metals, with or without hydrogen.

siliceous deposits (*Geol.*). Those sediments, incrustations, or deposits which contain a large percentage of silica in one or more of its modes of occurrence. They may be chemically or mechanically formed, or may consist of the siliceous skeletons of organisms such as diatoms and Radiolaria. See also *silicification*.

siliceous sinter (*Geol.*). Cellular quartz or translucent to opaque opal, found as incrustations or fibrous growths and deposited from thermal waters containing silica or silicates in solution.

silicic acid (*Chem.*). An acid formed when alkaline silicates are treated with acids. Amorphous, gelatinous mass. Dissociates readily into water and silica.

silicides (*Chem.*). Compounds formed by the combination of silicon with other elements, chiefly metals.

silicification (*Geol.*). The process by which silica is introduced as a cement into rocks after their deposition, or as an infiltration or replacement of organic tissues or of other minerals such as calcite. See also *novaculite*.

silicole (*Bot.*). A plant which grows on soils rich in silica, and usually acid in reaction.

silico-manganese steel (*Eng.*). See *manganese alloys*.

silicon (*Chem.*). A nonmetallic element, symbol Si, at. no. 14, r.a.m. 28.086, valency 4. Amorphous silicon is a brown powder; rel.d. 2.42. Crystalline silicon is grey; rel.d. 2.42, mp 1420°C, bp 2600°C. This element is the second most abundant, silicates being the chief constituents of many rocks, clays and soils. Silicon is manufactured by reducing silica with carbon in an electric furnace, and is used in glass and in making certain alloys,

e.g. *ferro-silicon*. It has semiconducting properties and is used for a large range of electronic components. **silicon bronze** (*Eng.*). A noncorroding alloy of copper and tin.

silicon carbide (*Chem.*). SiC. Formed by fusing a mixture of carbon and sand or silica in an electric furnace (Acheson furnace). Used as an abrasive and refractory carbide.

silicon-controlled rectifier (*Electronics*). A three semiconductor switching device consisting of a stack of *p-n-p-n*-type materials. It is normally open to application of an appropriate control signal, but allows it to conduct, in one direction only, when the gate signal removed, until it is reverse biased. voltage it is intended to switch. Used in voltage regulation of power circuits.

silicon copper (*Eng.*). An alloy (20-30% Si) used to remove oxygen from molten copper alloys.

silicon detector (*Telecomm.*). Stable silicon crystal for demodulation.

silicon dioxide (*Chem.*). Silicon (IV) oxide. See *silica*. **silicone resins** (*Bulld.*). A group of resins with properties which benefit coatings e.g. resistance to acids, alkalis, oils, salts and the ability to repel water. Used in the manufacture of masonry, water repellents. Silicones are also used in polishes.

silicone rubbers (*Chem.*). An important group of synthetic rubbers (dimethylsiloxane polymers) with both high and low temperature resistance, better than those for natural rubbers.

silicones (*Chem.*). Open-chain and cyclic organic compounds containing $-\text{SiR}_2\text{O}-$ groups, formed mainly by hydrolysing alkyl or aryl silicon dihalides, R_2SiX_2 , which are themselves made by the reaction of silicon with halogens. The simpler substances are oils of low melting-point, the viscosity of which changes with temperature, used as lubricants, shock-absorbers, constituents of polishes etc. More complex solids, stable to heat and cold, and chemically inert, exceptionally good electrical insulators for motors etc. Also used in gaskets and a wide range of special applications.

silicon hydrides (*Chem.*). See *silanes*.

silicon iron (*Eng.*). Iron or low carbon steel to which 0.75-4.0% silicon has been added. Has low magnetic hysteresis, and is resistant to mild acids. Used for transformer cores. Typical composition: silicon 0.75-4.0%, manganese 0.1%, phosphorus 0.02%, carbon 0.05%.

silicon rectifier (*Electronics*). A semiconductor rectifier usually based of *p-n* junction in silicon. **silicon resistor** (*Electronics*). A resistor of special material which has a fairly constant positive temperature coefficient, making it suitable as a temperature-measuring element.

silicon tetrachloride (*Chem.*). *Tetrachlorosilane*. Formed by the action of chlorine on a mixture of silicon and carbon, or silicon. Liquid.

silicon tetrafluoride (*Chem.*). *Tetrafluorosilane*. A gaseous compound formed by the action of hydrofluoric acid on silica. Readily hydrolyses into silicic acid.

silicosis (*Med.*). Pneumoconiosis, due to the inhalation of particles of silica by masons and miners who work in the presence of silica.

siliquea (*Bot.*). A capsule with the general character of a silicle, but at least 4 times as long as it is broad.

silique (*Bot.*). A capsule with the general character of a silicle, but at least 4 times as long as it is broad. **silk** (*Min.*). A sheen resembling that of silk, exhibited by some corundums, including ruby, and due to the presence of tubular cavities, or to rutile needles, in parallel orientation. The colour of such stones is paler than normal because of the inclusions.

silk (*Textiles*). The protein fibre obtained from the continuous fine strands from the cocoon of silkworms, especially of the moth *Bombyx mori*. The fibre is composed of fibroin surrounded by another protein, which is sericin.

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silk (e.g. *the silkworm*). A moth.

silk (*Zool.*). A silkworm. It is a member of the class Insecta, order Lepidoptera.

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Webster's Unabridged Dictionary of the English Language



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...lenced, -lenc-ing, interj. und or noise; stillness. 2. the state; muteness. 3. absence or omission of being forgotten; oblivion. 4. years of silence. 5. concealing put or bring to silence; still, etc.) to rest; quiet. 8. Mil. to a more effective fire. —interj. 9. teacher shouted. [ME < OE NT, -ENCE]

r, n. 1. one who or that which for deadening the report of a rifle. the muffler on an instrument. [SILENCE + -ER]

1. making no sound; quiet; abstaining from speech. 3. speechless to speak; taciturn; reticent; absence of speech or sound; silence; tacit: a silent assent. 7. omitted, as in a narrative: The record. 8. inactive or quiescent; undisturbed or pronounced: The motion picture. 10. Motion Pictures: nothing but a sound track. —n. 11. [L silent- (s. of silens), prefix] —si-lent-ly, adv.

See still. 8. dormant. —An-

See dumb barter. small receptacle having a handle for collecting the contents of a dinner table, etc., for disposal. power chain consisting of a number of joined by pins and bearing teeth on the sprockets with

Elect. the gradual discharge of electricity from a condenser characteristic of a corona. a novel (1928-40) by M.

a partner taking no active part. Cf. secret partner. (sometimes cap.) the subject by the.

dumb barter. the act or an instance of business toward another person of disapproval, disgust, etc. of persons or groups, based on a preference, as

pl. -ni (-ni) for 2. Cissampelos the oldest of the satyrs and companion of Dionysus. old man with the ears and feet astride a cask or a donkey. forest spirits similar to satyrs.

a town in central North Carolina.

hə, nt, led on, ent]
hə, ral led ich n), va-he 45 er-
der Polish administrative, and other mineral. sk. Czech, Slezsko.

n), n., v., -et-ted, -et-ted presentation of the outline drawing, usually black, esp. a black. 2. the outline of something: the slim silhouette. 3. a dark image or background. 5. a silhouette. 6. a silhouette (e cut) so as to form

silicic acid. Chem. any of certain amorphous silicic masses, formed when alkaline silicates are treated with acids, which dissociate readily into silica and water.

silicide (sil'ī sid', -sid), n. Chem. a compound of two elements, one of which is silicon. [SILIC- + -IDE]

siliferous (sil'ī sit'ər əs), adj. containing, combined with, or producing silica. [SILICI- + -FEROUS]

silified wood, wood which has been changed into quartz by a replacement of the cellular structure of the wood by siliceous waters.

silify (sil'ī fī'), v.t., v.i., -fied, -fy-ing. to convert or be converted into silica. [SILIC- + -IFY]

silicle (sil'ī kl), n. Bot. a short silique. [< L silicula(a) husk or pod. See SILIQUE, -ULE]

silico-, var. of silic-: silicomanganese. Silicon (sil'ē kən, -kon'), n. Chem. a nonmetallic element having amorphous and crystalline forms, occurring in combined state in minerals and rocks and constituting more than one fourth of the earth's crust: used in steel-making, alloys, etc. Symbol: Si; at. wt.: 28.086; m.p.: 1414; sp. gr.: 2.4 at 20°C. [SILIC- + -ON, modeled on silicon]

silicon carbide, Chem. a very hard, insoluble, crystalline compound, SiC, used as an abrasive and as an electrical resistor in objects exposed to high temperatures.

silicon dioxide, Chem. silica. Silcone (sil'ē kōn'), n. Chem. any of a number of polymers containing alternate silicon and oxygen atoms, (—Si—O—Si—O—), whose properties are determined by organic groups attached to the silicon atoms, and which are fluid, resinous, rubbery, extremely stable in high temperatures, and water-repellent: used as adhesives, lubricants, and hydraulic oils and in electrical insulation, cosmetics, etc. [SILIC- + -ONE]

silicon tetrachloride, Chem. a colorless, fuming liquid, SiCl₄, used chiefly for making smokecreens and other derivatives of silicon.

silicon tetrafluoride, Chem. a colorless, fuming liquid, SiF₄, used chiefly in the manufacture of fluosilicic acid.

Silicon Valley, an area just south of San Francisco, California, where many computer firms are located. [from the silicon wafers used in semiconductor]

silicosis (sil'ē kō'sis), n. Pathol. a disease of the lungs caused by the inhaling of siliceous dusts, as by stonecutters. [SILIC- + -OSIS]

silicotic (sil'ē kōt'ik), adj. Silulose (sil'ē lō's), adj. Bot. 1. having silicles. 2. having the form or appearance of a silicle. [< NL siliculōs(us), silicle, -ose]

silula (sil'ē kwā), n., pl. -quae (-kwē). a coin of ancient Rome, the 24th of a solidus, first issued by Constantine. [L: lit., pod]

silule (sil'ē lē), n. Bot. the long seed-vessel or pod of cruciferous plants. [L: silula, of SILICULA] —siluleous (sil'ē kwā'shəs), adj.

silulose (sil'ē kwō's), adj. 1. bearing silicles. 2. resembling a silique or silicle. Siluliquous (sil'ē kwō's), adj. See SILIQUE, -OSE]

silken (sil'ē kən), n. 1. the soft, lustrous fiber of a filament from the cocoon of a silkworm. 2. thread made from this fiber. 3. cloth made from this fiber. 4. a peaked cap, considered together with a jockey or sulky driver in a race. 5. of such material worn distinctively by a King's or Queen's Counsel at the English bar. 6. any barrister of high rank. 7. a thrill to see hundreds of men hitting the silk. —adj. 12. made of silk. 13: resembling silk; of or pertaining to silk. —v.t. 15. (of corn) to follow the course of developing silk. [ME; OE stōloc, silcel, silik; < Gk sērōn silk, n; use of neut. pl. silken, lit. of Seres (i.e., China)]

silken (sil'ē kən), n. a soft, thin cotton fabric

silique (sil'ē kwā), n. Bot. a long seed-vessel or pod of cruciferous plants. [L: silique, of SILICULA] —siliqueous (sil'ē kwā'shəs), adj.

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—v.t. 3. to print by silkscreen. —adj. 4. printed with silkscreen. [SILK + SCREEN] silk-stock-ing (silk'stok'ing), adj. 1. ous in dress. 2. aristocratic or wealthy neighborhood. —n. 3. one who dresses richly. 4. an aristocratic or wealthy person. silk' tree', a tree, Albizzia julibrissin, Iran to central China, having light-pink flowers.

silk-weed (silk'wēd'), n. any milkweed of the family Asclepiadaceae, the pods of which contain a silky down. [SILK + WEED']

silk-worm (silk'wŭrm'), n. 1. the larva of the Chinese silkworm moth, Bombyx mori, which spins a cocoon of commercially valuable silk. 2. the larva of any of several moths of the family Saturniidae, which spins a silken cocoon. [ME sylkewyrme, OE seolcwyrme. See Bombycidae and Saturniidae, the larva silkworms.]

silk-y (silk'kē), adj. silk-i-er, silk-i-est. silk; smooth, lustrous, soft, or delicate. 2. Bot. covered with fine, soft, closely set hairs. [SILK + -Y] —silk'i-ly, adv. —silk'i-n-

silk'y ant-eater, an arboreal, tropical anteater, Cyclopes didactylus, about the having a prehensile tail, glossy, golden fur on each forelimb. Also called two-toed ant-eater.

silk'y camel-lia, a shrub, Stewartia dron, of the southeastern U.S., having leaves and white flowers nearly four inches across.

silk'y cor-nel, a cornel, Cornus Amomum, eastern U.S., having leaves covered with hairs on the underside.

silk'y fly-catcher, any of several species of the family Ptilonotidae, of the southwestern U.S., related to the waxwings.

silk'y oak'. See silk oak.

sill (sil), n. 1. a horizontal timber, block serving as a foundation of a wall, house, horizontal piece or member beneath a window opening. See diag. under double-hung. a tabular body of intrusive igneous rock, or between beds of sedimentary rocks or layers of ejecta. [ME sille, OE syl, sylle; c. LG still, I to Icel still, G Schuelle] —sill'-like', adj.

silla-bub (sil'ē bub'), n. a drink or dish of cream mixed with wine, cider, or the sweetened and flavored. Also, sil'li-bub' [?]

Sil-lan-pää (sil'län pa'), n. Frans Eemil Sill, 1888-1964, Finnish author; Nobel prize winner. 1906.

sill-cock (sil'kōk'), n. hosecock. [SILL- called from the fact that it is often attached at about the height of a sill]

sil-ler (sil'ər), n. Scot. silver.

sil-li-man-ite (sil'ē mē nīt'), n. a mineral silicate, Al₂SiO₅, occurring in the form of large and often fibrous crystals. Also called fibroli after Benjamin Silliman (d. 1864), American geologist; see -IT-]

silly (sil'ē), adj. -li-er, -li-est, n., pl. -li-ly. 1. weak-minded; lacking good sense; stupid. 2. silly writer. 3. absurd; ridiculous; irrational. 4. Informal, stunned; dazed: He knocked me out. 5. Cricket. (of a fielder or his playing position) close to the batsman's wicket: silly mid off. 6. rustic; plain; homely. 7. Obs. lowly in rank. 8. silly or foolish person: Don't be such a silly. 9. silly happy, innocent, weak, OE (Anglian) sēlig, sēl, sēl happiness + -ig -r; c. G sēlig] —sil'-ly-ness, n.

—Syn. 1. witless, senseless, dull-witted, dim-witted. 2. inane, asinine, nonsensical, preposterous. —Ant. 1. sensible.

silly bil-ly, a clownish person.

silly sea-son, a time of year, usually in mid-June or during a holiday period, characterized by excessive news stories, frivolous entertainments, outlandish stunts, etc.: The new movie reminds us the season is here.

sil-lo (sil'ō), n., pl. -los, v., -loed, -lo-ing. a structure, typically cylindrical, in which the forage is kept. 2. a pit or underground space for grain, green feeds, etc. 3. Mil. an underground installation constructed of concrete and steel.

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Silique of plant, genus Brassica



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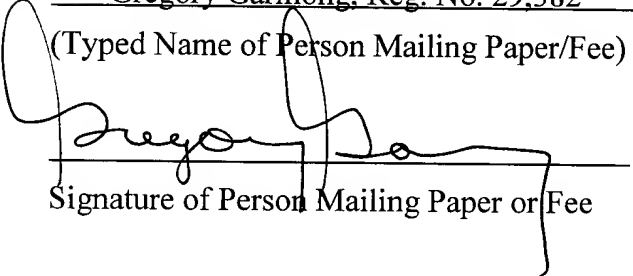
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